

Claims

Sub. C1 > 1. A pipe comprising a core layer being formed of a composite material formed by a coalescence of materials, including an aggregate of materials providing strength and rigidity and a bonding agent, and outer layers on respective sides of the core layer, each of the outer layers being formed of a plastics material.

2. A pipe according to claim 1 wherein the core layer is formed of a plastic concrete.

Sub. C2 > 3. A pipe according claim 1 or 2 where the outer layers are in the form of tubes.

Sub. C1 > 4. A method of manufacturing a pipe comprising forming a pair of material layers from a plastics material, positioning the material layers in a spaced apart relation, and forming a core layer between the preformed material layers.

5. A method according to claim 4 wherein the material layers are in the form of tubes.

Sub. C3 > 6. A method according to claim 4 or 5, wherein the core layer is formed of a plastic concrete and is introduced in a flowable state between the preformed material layers to be moulded therein.

7. A method according to any of claims 4, 5 or 6, wherein the preformed material layers are formed and are retained in their moulds to provided the formwork for moulding of the core layer.

Sub. C1 > 8. A method according to claim 7 wherein the preformed layers are formed by filament winding, by hand lay up, or by forming a sheet which is then rolled and bonded to form a tube.

Sub. C3 > 9. A method according to any of claims 4 to 8 wherein the plastic concrete,

is adjusted so as to commence curing within a short time of being introduced between the preformed layers, whereby lower layers of the plastic concrete cure when further layers of the plastic concrete are introduced.

10. A method according to any of claims 4 to 8 wherein the material layers are formed from synthetic resin.

11. A method according to any of claims 4 to 9 wherein the core layer comprises a thermosetting resin or a thermoplastic resin.

Sub. C1 > 12. A method according to claim 10 wherein the thermosetting resin is one or more of a polyester resin, an epoxy resin, an acrylic resin, a vinylester resin and a polyurethane resin.

13. A method according to claim 10 wherein the thermoplastic resin is one or more of a polyvinylchloride resin, a polypropylene resin and a polyurethane resin.

Sub. C1 > 14. A method according to any of claims 10 to 13 wherein the core layer further includes a reinforcement.

Sub. C1 > 15. A method according to claim 13 wherein the reinforcement is an inorganic material.

16. A method according to claim 15 wherein the inorganic material is one or more of silica sand, silica powder, calcium powder, gravel, stone chippings, ceramic power and ceramic chippings.

Sub. C1 > 17. A method according to any of claims 13 to 15 wherein the core layer includes further reinforcement.

Sub. C1 > 18. A method according to claim 16 wherein the further reinforcement includes one or more of glass, metal and plastic fibres.

Sub. C1 >

19. A method of manufacturing a pipe, the method comprising forming a pair of inner and outer tubular laminates from a plastics material, locating the respective ends of the inner and outer laminate in respective first and second moulding members, arranging a third moulding member on the first and second layers, to guide the plastics material into the space between the first and second layers, introducing a moulding material between the first and second layers via the third moulding member, the moulding material being formed of a plastic concrete, removing the third moulding member, and providing a fourth moulding member on the third moulding member, and introducing further plastic concrete into the gap between the inner tube and the fourth moulding member.

20. A mould assembly for moulding a pipe, the assembly comprising a plurality of moulds formed of polymer concrete.

21. Any novel subject matter or combination including novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.